

TURNING SUPPLIES & REPLACEMENT PARTS

- 155-1100 .....Set of Bushings
- 071-0070 .....7mm Drill Bit
- 050-9130 .....Replacement Tubes (2)

HOW TO CONTACT US...

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**CRAFT SUPPLIES USA**  
 The Woodturners Catalog

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European Pen



Drill: 7mm  
 Blank: 3/4" x 3/4" x 5"

For use with the following: 050-4100, 050-4101, 050-4120, 050-4110, 050-4165, 050-4166, 050-0301, 050-4495, 050-4062

**SAFETY:** Be sure to read and follow the safety instructions that came with your lathe. Always wear proper eye and ear protection when using shop equipment. A dust mask is also recommended when turning and sanding. Operate your lathe at a safe speed.

**CUTTING:** Measure the length of each brass tube, then mark the blanks so they are 1/8" longer than the brass tube(s) when cut. This allows for trimming later on.

**DRILLING:** Mark the center of each blank, then secure it in a clamp or vise. Set the drill press speed to 2,000 – 3,000 rpm for wood or 500 – 600 rpm for plastics, then drill each blank using the appropriate size bit(s). Make sure to clear the bit after every 1/2" – 1" of drilling to clear the chips and reduce heat buildup.

**GLUING:** With 220 grit sandpaper, slightly scuff each brass tube leaving scratches for the glue to adhere to. We recommend gap-filling cyanoacrylate glue for fast drying and epoxy – 3,000 drying. Apply a coat of glue to the tube and rotate the tube as you insert it into the drilled blank. Set the blank aside until the glue cures.

**TRIMMING:** Use a barrel trimmer to square the ends of the blank. This is the fastest and most accurate method of ensuring a proper fit. You may also use a disc sander to carefully sand the ends square with the tube. **Make sure not to remove any of the brass tube as this may result in an improper fit when assembled.**

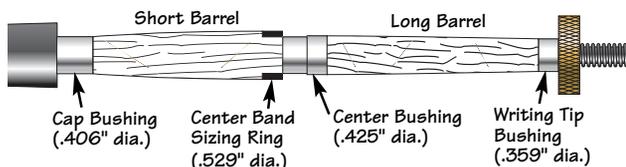
2 Setup & Turning

**STEP 1** In the following order, mount the cap bushing (.406" dia.), short barrel, center band sizing ring (.529" dia.), center bushing (.425" dia.), long barrel, and writing tip bushing (.359" dia.) onto a pen mandrel. Advance a 60° revolving center into the dimpled end of the mandrel applying only light pressure. **DO NOT** over tighten as this may cause the mandrel to bow, resulting in oval shaped barrels.

**STEP 2** Turn both barrels to the desired shape leaving the barrels slightly larger than the bushings.

**STEP 3** Cut a 1/8" wide tenon on the end of the short barrel. Size the tenon so that the center band sizing ring will slide snugly onto the tenon. When a proper fit is obtained, increase the width of the tenon to 1/4" (3/16" if using a plain center band).

**STEP 4** Leaving the center band sizing ring on the short barrel, sand and finish the barrels. For best results, sand up to 600 grit. When finished, remove the center band sizing ring.



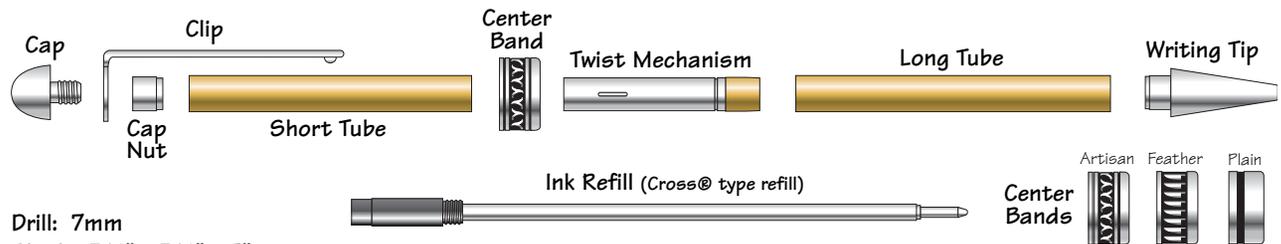
3 Assembling the Project

**BEFORE ASSEMBLY:** Read the assembly instructions completely, then layout the project parts according to the drawing. This will help familiarize yourself with the parts and how they will go together. We strongly recommend using a vise or clamp with wooden jaws when assembling to avoid damaging the parts.

ASSEMBLY:

1. Press the writing tip into the small end of the long barrel.
2. Press the twist mechanism, brass end first into the large end of the long barrel, about 1/4" past the indentation on the silver portion of the mechanism. Test the fit by inserting the refill into the mechanism and twisting. If the pen tip does not extend far enough, the mechanism needs to be pushed in a little further. **DO NOT** press it in too far, as you cannot pull it back.

3. Press the cap nut, stepped end first into the small end of the short barrel.
4. Slide the clip over the threaded stud on the cap, then screw the cap into the cap nut.
5. Place a few small drops of glue inside the center band, then carefully slide the center band onto the tenon and let the glue cure.
6. Press the short barrel over the exposed twist mechanism in the long barrel to complete the pen.



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